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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/140,862	08/27/98	ALBERT J	INK-006

021323
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LM12/0523

EXAMINER	
LEWIS, D	
ART UNIT	**PAPER NUMBER**
2778	10

DATE MAILED: 05/23/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/140,862	Albert et al.
Examiner	**Group Art Unit**
David L Lewis	2778

☒ Responsive to communication(s) filed on *Mar 13, 2000*

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-10* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-10* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claim 6 is rejected under 35 U.S.C. 102(a) as being anticipated by Saxe et al. (5,650,872).**

3. **As in claim 6, Saxe et al. teaches** of an electrophoretic display comprising: a substrate, figure 5 item 29, at least one capsule containing a suspending fluid and at least one particle, **figure 5 item 26 and 25, column 13 lines 40-47**; at least two electrodes disposed adjacent the at least one capsule, said at least two electrodes disposed between said substrate and said at least one capsule, wherein application of a voltage potential to one of said at least two electrodes causes said at least one particle to migrate within said capsule, causing said capsule to change its visual state, **column 1 lines 15-50, column 2 lines 55-67.**

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saxe et al. (5,650,872).**

6. **As in claim 1, Saxe et al. teaches of** a electrophoretic display comprising: at least one capsule containing a suspending fluid and at least a first particle and a second particle, figure 5-8, **column 13 lines 40-46**, and at least two electrodes disposed adjacent said capsule, **column 4 lines 28-36**; wherein application of an electric field to said capsule by said electrodes causes said capsule to change visual state responsive to the optical properties and electrophoretic mobilities of said particles, **column 2 lines 55-67**. However **Saxe et al. doesn't explicitly teach** said particles having a first electrophoretic mobility and a said second electrophoretic mobility. While not explicitly taught said **features are however inherent and intrinsic** to the teaching of Saxe et al. Saxe et al. specifically teaches that a light valve suspension can comprise more than one type of particles. Further Saxe teaches two are more different pigments or other types of particles may be combined in any useful proportions to form suspensions having a vast number of different off-state colors, column 13 lines 30-46. Different types of particles imply different particles structures, which imply different intrinsic mobilities of the particles concerned. Saxe teaches of different particles having the same shape and size displaying different conductivities and dipole moments. In addition to the particles of different types, particles of the same type with different pigments will theoretically have

different mobilities based on the influence of the pigments on the particles. **Therefore it would have been obvious** the skilled artisan at the time of the invention that Saxe et al. inherently teaches of a first and second particle mobility.

7. **As in claims 2-5, Saxe et al. teaches of** the invention as applied to claim 1 above. Further claims 2-5 would have been obvious to the skilled artisan said limitations being well known in the art. As in claim 2, Saxe teaches wherein said first and second electrophoretic mobility are non-overlapping, column 13 lines 30-46, wherein it would be obvious based on said suspension having two or more different types of particles to produce a vast number of different off state colors, to formulate of color display, would also have non-overlapping mobilities based on the different types of particles. As in claim 3, Saxe et al. teaches of two or more particles which can be various colors, column 6 lines 45-65. As in claim 4, Saxe et al. teaches of said suspending fluid being transparent, column 8 lines 5-30, as well known in the prior art. As in claim 5, Saxe et al. teaches of wherein said suspending fluid is dyed, column 13 40-47.

8. **As in claims 7-9, Saxe et al. teaches of** the invention as applied to claim 6 above. Further claims 7-9 would have been obvious to the skilled artisan said limitations being well known in the art. As in claim 7, Saxe et al. teaches said suspending fluid is transparent, column 8 lines 5-30. As in claim 8 and 9 Saxe et al. teaches wherein at least one particle has an optical property matching an optical property of one of said at least two electrodes, column 7 lines 55-67, column 5 lines 1-13, column 13 lines 40-47, wherein particles and electrodes can be metal and/or colored.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claim 1-9 is rejected under 35 U.S.C. 102(a) as being anticipated by Ota (3756693).

11. **As in claim 1 and 6, Ota teaches** of an electrophoretic display comprising: a substrate, **figure 1a item 5**, at least one capsule containing a suspending fluid and at least a first particle and a second particle, **figure 1a, wherein the volume of an electrophoretic dispersion is encapsulated in between housing walls 4 and 5 to form at least one capsule**; said first particle having a first optical property and a first electrophoretic mobility and said second particle having a second optical property and a second electrophoretic mobility, **column 5 lines 1-16**, and at least two electrodes disposed adjacent the at least one capsule, said at least two electrodes disposed between said substrate and said at least one capsule, wherein application of a voltage potential to one of said at least two electrodes causes said at least one particle to migrate within said capsule, causing said capsule to change its visual state, **column 4 lines 24-53**. Further as in claims 2-5 and 7-9 Ota teaches of transparent and colored electrodes, colored particles including white, transparent and colored suspending fluid.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota (3756693).**

14. **As in claim 10, Ota teaches** of an electrophoretic display, **figure 1a**, comprising: at least one capsule containing a suspending fluid and at least one particle; several different colored electrodes, **column 3 lines 1-50**, wherein the color is formed by a coated layer 50, wherein the application of two different voltages causes the electrophoretic particles to migrate forming a light or dark image, **column 3 lines 25-50**. However **Ota does not teach the exact claims language** as shown in claim 10. Ota however teaches the same idea and image formation based on an electrophoretic display comprising colored electrodes disposed adjacent said capsule, wherein application of a voltage causes the particles to migrate forming an image, **wherein claim 10 is an obvious variation to the display as taught by Ota**, and would have been obvious to the skilled artisan at the time of the invention.

Response to Arguments

15. Applicant's arguments with respect to claim 1-10 have been considered but are not persuasive. 1) Saxe discloses particles that orient and in that process inherently migrate. 2) As well known in the art and also well known in the art, particles can be encapsulated between two electrodes, DiSanto et al. (5279511), column 1 lines 40-45. 3) Said overlays as taught by Ota inherently color the electrodes.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 1) As well known in the art particles can be encapsulated by resin, Wells (3772013), column 11 lines 35-37. 2) Applicant is well aware of the existing prior Art fully anticipating multi-particle migration, Naoyuki (JP 01086116). 3) Applicant is well aware of the existing prior Art by Wells et al. (3850627), column 3 lines 46-52. 4) Applicant is well aware of DiSanto et al. (5279511), column 1 lines 40-45. 5) Applicant is well aware of the existing prior art by Ota et al. (3870517), column 2 lines 58-67.

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(703) 306-3026**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any

inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

BOX AF

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Or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Or hand-delivered to:

Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

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